

2007-2009 Power Costs, Credits, Risk: Overview

Purpose of this presentation:

- ♦ The Power Function Review (PFR) is about the costs that will be recovered in the 2007-09 power rates. It is not about the rate level.
- ♦ But PFR participants need to know roughly where rates **may** be headed in order to comment on the costs.
- ♦ The purpose of this presentation is to provide PFR participants with a ballpark sense of where the rates **could** end up under various assumptions about the future.

Important disclaimers

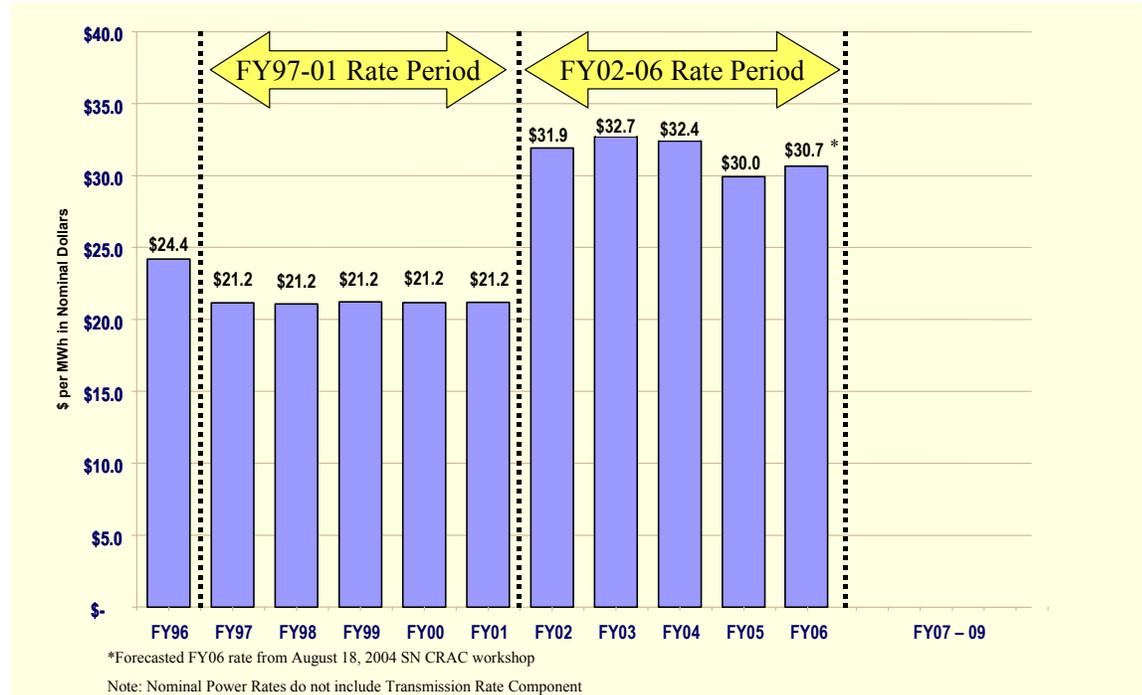
- ♦ The PFR is about the costs that go into the initial rate proposal. Several other issues that will be decided in the 2007 rate case will also have major impacts on the rate level.
- ♦ The numbers presented here are forecasts being used as the starting point for PFR review. No increases or decreases as a result of the PFR process are included.

FY07-09 PF Rate Overview

$$\frac{\text{Costs} - \text{Credits} + \text{Risk}}{\text{Loads} * 8.76} = \text{Rate}$$

**Point of Reference Used Here:
2002-2006 Average PF Rate: 31.5 mills/kWh**

Actual and Forecasted Nominal Power Rates: FY 1996-2006



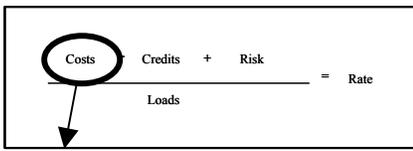
Note: 2002-2006 actual PF rates are expected to fall somewhat short of covering actual net expenses. BPA was in the black for 2003-04 and expects to be in the black for 2005, but not enough to cover the loss in 2002. On average, annual modified net revenues for the 2002-2006 period are expected to be -\$54 million/year for a loss over the rate period of just over \$250 million.

Major Changes In Costs and Revenues Between 2002-06 And 2007-09

- ♦ Augmentation Purchases Expire
- ♦ IOU Residential Exchange Settlement Changes
- ♦ DSI Service Changes
- ♦ Higher PF Loads
 - 720 aMW Presub. load converting to PF load
 - 780 aMW public load increases due to stepped-up blocks from their initial level in 2002 and load growth for load-following customers (including expiration of PF buydowns)
- ♦ Higher O&M Costs
- ♦ Higher Debt Service Costs
- ♦ Long-Term Surplus Sales expire
- ♦ FY02-06 below average water, FY07-09 average water
 - 02-06 122 average annual maf (*assumes FY05-06 is average water*)
 - 07-09 134 average annual maf

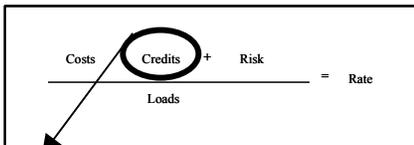
Summary:

- ♦ Pending the PFR outcome, average costs to PF load (with no adder for risk mitigation) are forecasted to fall from 31.5 mills/kWh in 2002-06 to 28 mills/kWh.
- ♦ However, lower reserve levels, higher secondary revenue volatility and other factors substantially increase the need for risk mitigation in the 07-09 rates.
- ♦ Depending on the approach used, risk mitigation could more than offset the average cost decrease.



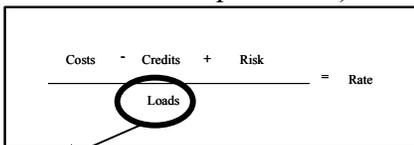
Total Annual Costs: \$230 million/year lower in 2007-2009.

- ♦ Augmentation and buydown costs down by \$640 million/year
- ♦ Other purchase costs down by \$70 million/year
- ♦ O&M costs up by \$125 million/year
 - ♦ CGS: up \$70 million/year
 - ♦ Hydro: up \$45 million/year
 - ♦ BPA internal: up \$10 million/year
- ♦ Debt Service costs (net interest, depreciation, amortization, nonfederal, minimum required net revenue) up by \$120 million/year
- ♦ Residential exchange settlement payments to IOUs (not including 2002-2006 buydown costs) up by \$145 million/year (Assumes IOU payments are near the \$300 million cap. This number is highly sensitive to market forecast and PF rate level)
- ♦ DSI financial benefits (assuming this is the outcome of ongoing discussion) up by \$40 million (this comparison does not count actual sales, augmentation costs, and buydown payments to DSIs in 2002-6)
- ♦ Other increase by \$50 million/year
 - ♦ Transmission and Ancillary & Reserve Services up by \$20 million/year
 - ♦ Renewables and L-T purchases up by \$30 million/year



Total Annual Credits and Non-PF Revenues: \$435 million/year lower in 2007-09

- ♦ Revenue from DSIs down by \$60 million/year
- ♦ Revenue from IOUs down by \$90 million/year
- ♦ Revenue from presubscription sales to publics down by \$130 million/year
- ♦ Revenue from other long-term firm contracts down by \$100 million/year
- ♦ FCCF credits down by \$15 million/year
- ♦ Secondary revenue down by \$20 million/year
- ♦ Other revenue credits down by \$20 million/year (small credits and non- trading floor surplus sales)



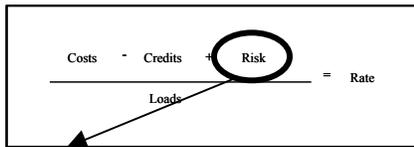
Total PF Load: 1500 aMW higher in 2007-09

- ♦ 780 aMW in PF load increases from load-following customers, and contractual step-ups for slice and block customers
- ♦ 720 aMW of presubscription sales converting to PF

Average Cost to the PF load (without risk mitigation) in 2007-9: 28 mills/kWh
(vs. average actual PF rate of \$32/MWh in 2002-06)

Sensitivity Analysis on \$28 mills/kWh average cost:

- ♦ Increase in the average secondary price of 4 mills would **reduce** average cost to PF loads by 1 mill
- ♦ Decrease in the average secondary price of 4 mills would **increase** average cost to PF loads by 1 mill
- ♦ Decrease of the market forecast for IOU benefits of 3 mills would **reduce** average cost to PF loads by 1 mill
- ♦ A higher market forecast for IOU benefits does not increase average net cost to PF loads significantly, because IOU benefits are near their cap.



Risk Mitigation in 2007-09

Setting rates just to cover expected costs minus expected revenues (per the analysis above) leaves TPP too low.

In the past, BPA has addressed risk thru Planned Net Revenues for Risk (PNRR) and CRACs

1997-2001:

- ♦ Agency reserves were forecasted to be around \$340 million going into this rate period in 1996, and full Fish Cost Contingency Fund (FCCF) credits of \$325 million were available
- ♦ Low PNRR and no CRAC included in rates for 97-01
- ♦ Worked out OK because actual secondary revenues were far higher than rate case estimate, actual costs were near rate case estimates, and FCCF/4h10c credits, along with reserves, offset much of the 2000/01 drought and power crisis impact

2002-2006:

- ♦ Power reserves were around \$500 million at the start of the period
- ♦ Some FCCF remained
- ♦ Low PNRR and multiple CRACs were used to address risks

2007-2009: Multiple factors are driving up the need for risk mitigation

- ♦ Low Power reserves (current forecast: under \$200 million)
- ♦ Bringing TPP target up from three-year 80% standard to historic three-year 92% standard
- ♦ FCCF is gone
- ♦ High reliance on volatile secondary revenues and its associated risk
- ♦ Increase in Power liquidity reserves (formerly known as working capital) from \$50 million to \$100 million

Appendix: 2002-2009 Power Costs, Credits and Loads

Annual Averages, \$ millions

	2002-6 May Base Rates Forecast	2002-4 Actuals, 2005-6 Forecast	2007-9 Forecast	Delta May Base Rates vs. 2007-09	Delta 2002-4 Actuals, 2005-6 Forecast vs. 2007-09	+ = Change that increases 07-09 rate - = Change that decreases 07- 09 rate
1 Credits						
2 Revenue from DSIs	\$182	\$60	\$0	(\$182)	(\$60)	+
3 Revenue from IOUs	\$173	\$91	\$0	(\$173)	(\$91)	+
4 Revenue from Presubs	\$157	\$174	\$45	(\$112)	(\$129)	+
5 Revenue from Long-Term contracts	\$304	\$181	\$75	(\$229)	(\$106)	+
6 4h10c and FCCF credits	\$118	\$92	\$76	(\$42)	(\$16)	+
7 Reserve and Ancillary Revenue	\$81	\$77	\$80	(\$1)	\$3	-
8 Other revenue credits	\$31	\$25	\$18	(\$14)	(\$8)	+
9 Other surplus sales (Non-TF sales)		\$12	\$0	\$0	(\$12)	+
10 BPA Secondary Sales	\$516	\$592	\$575	\$59	(\$17)	+
11 Total Credits	\$1,561	\$1,304	\$868	(\$693)	(\$436)	
12 Total Credits for Non-Slice customers		\$1,260	\$829		(\$431)	
13 Power Purchase and Buydown Costs						
14 Augmentation purchase costs	\$426	\$356	\$16	(\$410)	(\$340)	-
15 IOU buydown costs		\$242	\$23	\$23	(\$219)	-
16 DSI buydown costs		\$29	\$0	\$0	(\$29)	-
17 Public buydown costs		\$50	\$0	\$0	(\$50)	-
18 Renewables	\$20	\$22	\$56	\$36	\$34	+
19 Long-Term Generating Projects	\$28	\$28	\$25	(\$3)	(\$3)	-
20 Other purchase costs (Non-TF purchases)		\$38	\$0	\$0	(\$38)	-
21 BPA Secondary Purchases	\$75	\$117	\$85	\$10	(\$32)	-
22 Total Power Purchase and Buydown Costs	\$549	\$882	\$205	(\$344)	(\$677)	
23 Total Power Purchase and Buydown Costs payable by Non-Slice Customers		\$709	\$178		(\$531)	
24 O&M Costs						
25 Net interest, Depreciation, Amortization, non-fed	\$966	\$925	\$1,003	\$37	\$78	+
26 CGS	\$169	\$215	\$284	\$115	\$69	+
27 Corps/Bureau	\$159	\$197	\$242	\$83	\$45	+
28 Internal Ops	\$45	\$107	\$116	\$71	\$9	+
29 Conservation Expense	\$29	\$66	\$71	\$42	\$5	+
30 Other	\$65	\$83	\$80	\$15	(\$3)	-
31 Fish and Wildlife Direct	\$139	\$139	\$139	\$0	\$0	
32 Minimum Required Net Revenue	\$3	\$3	\$45	\$42	\$42	+
33 Transmission and Reserve/Ancillary	\$186	\$171	\$189	\$3	\$18	+
34 Residential Exchange Settlement Payments (not including buydown payments or costs of power deliveries to PGE) 1/	\$69	\$147	\$295	\$226	\$148	+
35 1/ 2007-09 value calculated using a PF rate assuming zero PNRR expense.						
36 DSI Financial Benefits (not including buydowns or costs of power deliveries)	\$0	\$0	\$40	\$40	\$40	+
37 LDD & Irrigation Discounts	\$18	\$18	\$35	\$17	\$17	+
38 Total O&M Costs	\$1,848	\$2,071	\$2,539	\$691	\$468	
39 Total O&M Costs payable by Non-Slice customers		\$1,629	\$1,994		\$365	
40 TOTAL COSTS	\$2,397	\$2,953	\$2,744	\$347	(\$209)	
41 TOTAL COSTS PAYABLE BY NON-SLICE CUSTOMERS		\$2,338	\$2,172		(\$166)	
42 Loads (aMW)						
43 PF	4343	3869	5383	1040	1514	
44 Slice (not available in May 2000)	0	1635	1650	1650	15	
45 DSI	990	186	0	(990)	(186)	
46 IOU *	1000	382	0	(1000)	(382)	
47 Pre-Sub Load	845	923	210	(635)	(713)	
48 Drivers of Secondary Revenue Change						
49 Average Net Secondary Sales Price (\$/MWh)	\$21.5	\$29.0	\$32.0	\$7.5	\$3.0	
50 Average 12-month Runoff (maf)	134	122	134	(12)	12	
51 Average Annual Net Secondary Sales (aMW)	2335	1928	1750	(407)	(178)	
52 NTS drawdown (+) and refill (-) (aMW)		15	-39		(54)	
53 Canadian Entitlement Return (aMW)		626	664		38	
54 Long Term Contracts (aMW)		517	124		(393)	
55 Augmentation (aMW)		1121	35		(1086)	
56 Public load (PF and Pre-Sub) (aMW)		4792	5593		801	
57 Residential Exchange Settlement* (aMW)		382	0		(382)	
58 Actual DSI Sales (aMW)		186	0		(186)	
59 System efficiency improvements (cumulative aMW)		40	180		140	

This document has been updated with:

- May 2000 Base Rates forecast for FY02-06.
- Average cost to PF load with and without Planned Net Revenue for Risk (PNRR).

Avg. cost to PF Load w/o PNRR	
FY07-09 Forecast	
NS Expenses	\$2,172
NS Credits	\$829
PF Load	5383
\$/MWh	\$ 28.47
FY02-06 Actuals	
NS Expenses	\$2,338
NS Credits	\$1,260
PF Load	3869
\$/MWh	\$ 31.80
FY02-06 (May / No Slice or PNRR)	
Expenses	\$2,397
- PNRR	\$102
Credits	\$1,561
PF Load	4343
\$/MWh	\$ 19.29
Avg. cost to PF Load w/ PNRR	
FY02-06 (May / No Slice)	
Expenses	\$2,397
Credits	\$1,561
PF Load	4343
\$/MWh	\$ 21.96

* 2002-4 Actuals, 2005-6 Forecast includes 258 aMW to PGE and 124 aMW to Idaho, Northwestern, & Avista